LISTING OF THE CLAIMS

The following listing, if entered, replaces all prior versions of the claims in the present application.

1. **(Currently Amended)** A method comprising:

replicating data from a first volume to a second volume, wherein

the replicating comprises copying to the second volume only data from regions of the first volume that are modified by application-driven update operations, ~~wherein~~ **and**

the application-driven update operations are initiated by an application managing data in the first volume;

while the replicating the data from the first volume is being performed, detecting a change to a first region of the first volume, wherein

the change is caused by a restore operation to restore the first volume from a third volume, ~~wherein~~

the restore operation is not an application-driven update operation initiated by the application,

the change is detected by detecting the restore operation and accessing a restoration data structure,

the restoration data structure identifies regions of the first volume that are not synchronized with the third volume, and

the change to the first region caused by the restore operation is not designated for replication from the first volume to the second volume at the time of the detecting;

in response to the detecting, adding information identifying the first region to a **replication** data structure, wherein

the **replication** data structure identifies regions of the first volume that are designated for replication **to the second volume**, ~~wherein~~

the regions of the first volume designated for replication to the second volume are regions of the first volume that are modified by

application-driven update operations and the first region of the first volume changed by the restore operation, and

the adding is performed while the replicating is being performed; and

in response to the adding the information to the **replication** data structure, replicating data modified by the restore operation from the first region of the first volume to the second volume, wherein

the replicating the data from the first region is performed while the replication of the data modified by the application-driven update operations from the first volume is ongoing, and ~~**wherein**~~

the replicating the data from the first volume, the detecting, the adding, and the replicating the data from the first region **[[is]]** **are** performed by a computing device implementing a replication facility.

2. (Canceled)

3. (Previously Presented) The method of claim 1 wherein the third volume is a snapshot of the first volume at one point in time.

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Previously Presented) The method of claim 1 wherein the first volume is accessible by the application during the replicating.

11. (Previously Presented) The method of claim 1 wherein the first volume is accessible by the application while being restored from the third volume.

12. (Canceled)

13. (Canceled)

14. **(Currently Amended)** A system comprising:

a processor;

computer-implemented means for replicating data from a first volume to a second volume, wherein

the replicating comprises copying to the second volume only data from regions of the first volume that are modified by application-driven update operations, ~~wherein~~ **and**

the application-driven update operations are initiated by an application managing data in the first volume;

computer-implemented means for detecting a change to a first region of the first volume while the data is being replicated from the first volume, wherein

the change is caused by a restore operation to restore the first volume from a third volume, and ~~wherein~~

the restore operation is not an application-driven update operation initiated by the application**,**

the change is detected by detecting the restore operation and accessing a restoration data structure,

the restoration data structure identifies regions of the first volume that are not synchronized with the third volume, and

the change to the first region caused by the restore operation is not designated for replication from the first volume to the second volume at the time of the detecting;

computer-implemented means for, in response to detection of the change, adding information identifying the first region to a **replication** data structure, **[[,]]** wherein

the **replication** data structure identifies regions of the first volume that are designated for replication **to the second volume,**

the regions of the first volume designated for replication to the second volume are regions of the first volume that are modified by application-driven update operations and the first region of the first volume changed by the restore operation, and ~~**wherein**~~

the information is added while the data is being replicated from the first volume; and

computer-implemented means for, in response to the addition of the information,

replicating data modified by the restore operation from the first region of the first volume to the second volume, wherein

the data from the first region is replicated while the data modified by the application-driven update operations is being replicated from the first volume.

15. (Canceled)

16. (Canceled)

17. **(Currently Amended)** A system comprising:

a processor; and

a memory coupled to the processor, wherein the memory stores program instructions executable by the processor to implement a replication facility, and wherein the replication facility is configured to:

replicate data from a first volume to a second volume by copying to the second volume only data from regions of the first volume that are modified by application-driven update operations, wherein

the application-driven update operations are initiated by an application managing data in the first volume;

while data from the first volume is being replicated, detect a change to a first region of the first volume, wherein

the change is caused by a restore operation to restore the first volume from a third volume, ~~**and wherein**~~

the restore operation is not an application-driven update operation initiated by the application,

the change is detected by detecting the restore operation and accessing a restoration data structure,

the restoration data structure identifies regions of the first volume that are not synchronized with the third volume, and

the change to the first region caused by the restore operation is not designated for replication from the first volume to the second volume at the time of the detecting;

in response to detection of the change, add information identifying the first region to a **replication** data structure, wherein

the **replication** data structure identifies regions of the first volume that are designated for replication **to the second volume,**

the regions of the first volume designated for replication to the second volume are regions of the first volume that are modified by application-driven update operations and the first region of the first volume changed by the restore operation, and ~~wherein~~

the information is added while the data from the first volume is being replicated; and

in response to the addition of the information, replicate data modified by the restore operation from the first region of the first volume to the second volume, wherein

the data modified by the application-drive update operations from the first region is replicated while the data is being replicated from the first volume.

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. **(Currently Amended)** A computer-readable storage medium comprising program instructions executable to:

replicate data from a first volume to a second volume by copying to the second volume only data from regions of the first volume that are modified by application-driven update operations, wherein

the application-driven update operations are initiated by an application managing data in the first volume;

while data from the first volume is being replicated, detect a change to a first region of the first volume, wherein

the change is caused by a restore operation to restore the first volume from a third volume, ~~and wherein~~

the restore operation is not an application-driven update operation initiated by the application,

the change is detected by detecting the restore operation and accessing a restoration data structure,

the restoration data structure identifies regions of the first volume that are not synchronized with the third volume, and

the change to the first region caused by the restore operation is not designated for replication from the first volume to the second volume at the time of the detecting;

in response to detection of the change, add information identifying the first region to a **replication** data structure, wherein

the **replication** data structure identifies regions of the first volume that are designated for replication **to the second volume**,

the regions of the first volume designated for replication to the second volume are regions of the first volume that are modified by application-driven update operations and the first region of the first volume changed by the restore operation, and ~~wherein~~

the information is added while the data from the first volume is being replicated; and

in response to the addition of the information, replicate data modified by the restore operation from the first region of the first volume to the second volume, wherein

the data from the first region is replicated while the data modified by the application-driven update operations is being replicated from the first volume.

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (**Currently Amended**) The method of claim 1, wherein the **replication** data structure comprises a log.

26. (**Currently Amended**) The method of claim 1, wherein

the **replication** data structure comprises a replication bitmap,

the restoration data structure comprises a restoration bitmap, and

~~**wherein**~~ the adding comprises performing a logical OR operation to combine the replication bitmap with **[[a]] the** restoration bitmap ~~**identifying regions affected by the restore operation**~~.

27. (**Currently Amended**) The method of claim 1, wherein the adding comprises combining the **replication** data structure and ~~**an additional**~~ **the restoration** data structure~~, wherein the additional data structure identifies regions of the first volume that are not synchronized with a snapshot of the first volume~~.

28. (**Currently Amended**) The method of claim 1, further comprising:

detecting a change to a second region of the first volume, wherein

the change to the second region is caused by the restore operation,

~~**wherein**~~ **and**

~~**information identifying the second region cannot be added to the data structure when the change to the second region is detected**~~

the change to the second region is not being tracked; and

causing the restore operation to fail, in response to the detecting.

29. (**Currently Amended**) The system of claim 17, wherein the **replication** data structure comprises a log.

30. (**Currently Amended**) The system of claim 17, wherein

the **replication** data structure comprises a replication bitmap,

the restoration data structure comprises a restoration bitmap, and

~~**wherein**~~ the information is added to the **replication** data structure by performing a logical OR operation to combine the replication bitmap with **[[a]] the** restoration bitmap ~~**identifying regions affected by the restore operation**~~.

31. (**Currently Amended**) The system of claim 17, wherein the information is added to the **replication** data structure by combining the **replication** data structure and ~~**an additional**~~ **the restoration** data structure~~**, wherein the additional data structure identifies regions of the first volume that are not synchronized with a snapshot of the first volume**~~.

32. (**Currently Amended**) The system of claim 17, wherein the replication facility is configured to:

detect a change to a second region of the first volume, wherein

the change to the second region is caused by the restore operation,

~~**wherein**~~ **and**

~~**information identifying the second region cannot be added to the data structure when the change to the second region is detected**~~

the change to the second region is not being tracked; and

cause the restore operation to fail, in response to detecting the change to the second region at a time at which ~~**the information identifying**~~ the second region ~~**cannot be added to the data structure**~~ **is not being tracked**.

33. (**Currently Amended**) The computer readable storage medium of claim 21, wherein the **replication** data structure comprises a log.

34. (**Currently Amended**) The computer readable storage medium of claim 21, wherein

the **replication** data structure comprises a replication bitmap,

the restoration data structure comprises a restoration bitmap, and

~~**wherein**~~ the information is added to the **replication** data structure by performing a logical OR operation to combine the replication bitmap with **[[a]] the** restoration bitmap ~~**identifying regions affected by the restore operation**~~.

35. (**Currently Amended**) The computer readable storage medium of claim 21, wherein the information is added to the **replication** data structure by combining the **replication** data structure and ~~**an additional**~~ **the restoration** data structure~~, wherein the additional data structure identifies regions of the first volume that are not synchronized with a snapshot of the first volume~~.

36. (**Currently Amended**) The computer readable storage medium of claim 21, wherein the program instructions are executable to:

detect a change to a second region of the first volume, wherein

the change to the second region is caused by the restore operation,

~~**wherein**~~ **and**

~~**information identifying the second region cannot be added to the data structure when the change to the second region is detected**~~

the change to the second region is not being tracked; and

cause the restore operation to fail, in response to detecting the change to the second region at a time at which ~~**the information identifying**~~ the second region ~~**cannot be added to the data structure**~~ **is not being tracked**.